

A NEW SPECIES OF *TETANOCERA* DUMÉRIL FROM COLORADO
(DIPTERA: SCIOMYZIDAE)

R. E. ORTH AND T. W. FISHER

Department of Entomology, Division of Biological Control, University of California, Riverside, California 92521.

Abstract.—A new species, *Tetanocera arnaudi*, is described from Teller County, Colorado. It is one of the smaller *Tetanocera* species found in North America, and shows some similarities with *T. spreta* van der Wulp (externally) and *T. brevihirta* Steyskal (male terminalia). Illustrations of the new species are included.

The genus *Tetanocera* is widespread in both the Nearctic and Palaearctic regions. In North America there are 31 species (including the species described herein), 11 of which are Holarctic. The genus is well represented in collections as these flies are relatively large and easily identified. The body coloration varies from yellowish to reddish-brown. Many species within the genus exhibit little diversity in external differences and in many cases dissection of the adult terminalia is the only effective means of separation.

The most complete work on North American *Tetanocera* was by Steyskal (1959), in which he listed 27 species, of which 8 were described as new. Illustrations and keys were provided for all species and a phylogenetic grouping was suggested where relationships could be shown. Since that work two new species occurring in North America have been described, *Tetanocera andromastos* Steyskal (1963), a very small species from Churchill, Manitoba, and *Tetanocera freyi* Stackelberg (1963), a Holarctic species from the NW European part of the USSR and North America (Alaska). Stackelberg (1963) also provided extensive illustrations for other members of the genus in the European part of USSR.

Tetanocera arnaudi Orth and Fisher, NEW SPECIES

Figs. 1-6

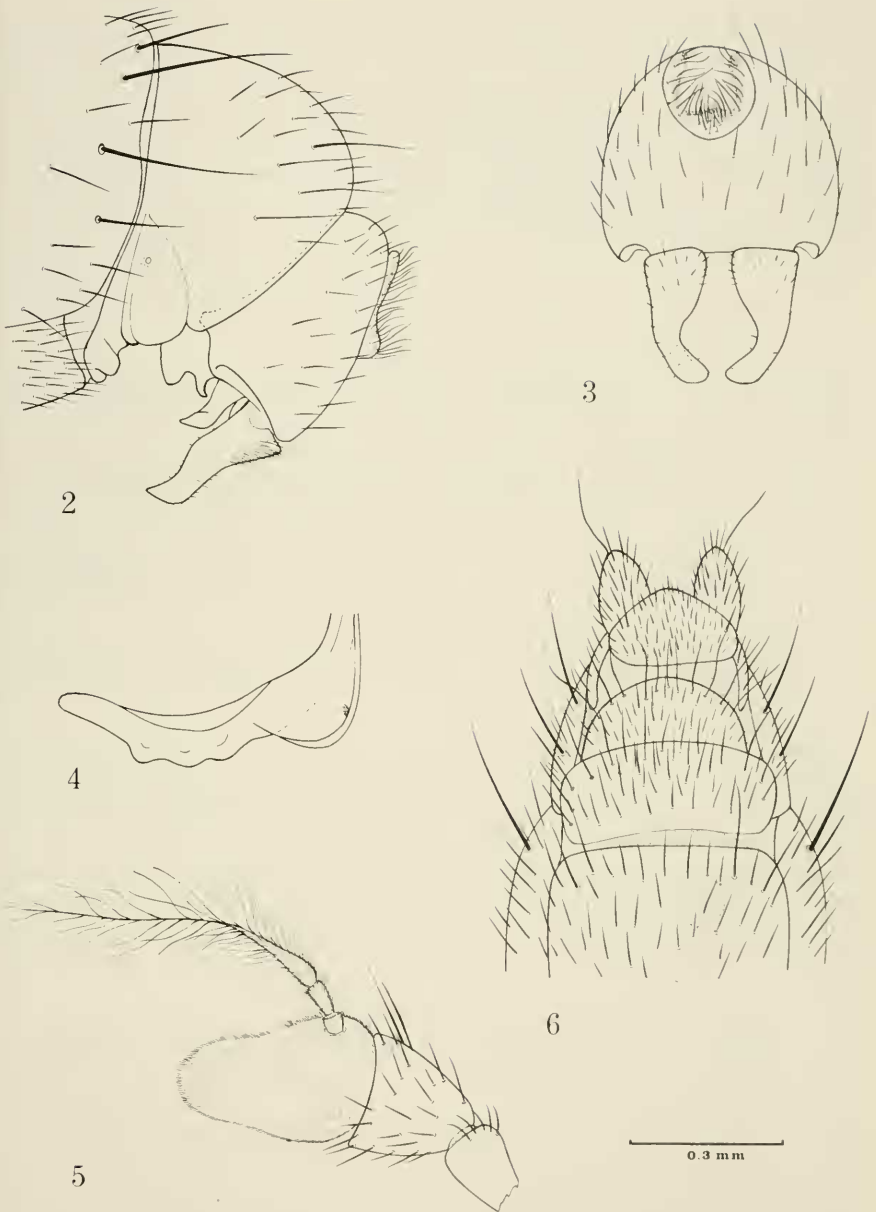
Holotype male.—Height of head $7/10$ width. Medifacies, parafacies, and cheeks whitish pruinose with a tinge of yellow. Parafacies with hairs extending less than halfway from lower margin of eyes to antennal sockets. Frons yellow, slightly narrowed anteriorly. Midfrontal stripe orangish brown, extending more or less parallel sided to anterior margin of frons. Ocellar



Fig. 1. *Tetanocera arnaudi*, holotype male. Before terminal segments were excised. Photo by M. E. Badgley, University of California, Riverside.

triangle and orbital plates with brownish pruinosity. Orbital plates tapered anteriorly, extending well beyond ocellar triangle. Orbitoantennal spot lacking, narrow strip of white pruinosity along upper orbital margin. Two pairs of fronto-orbital bristles of approximately equal length; ocellars, postocellars, and inner and outer verticals well developed. Occiput whitish pruinose. Lateral occipital margins with strong setae and bristles. Antenna testaceous, segment 2 approximately $\frac{2}{3}$ length of 3; segment 3 elongate, dorsal margin slightly concave. Arista black, plumosity of moderate length and density. Palpi yellowish, labium and labella brownish.

Thorax tannish yellow pruinose; dorsum with brownish longitudinal stripes. Pleura bare except sternopleuron with fine short hairs over most of the surface and well-developed bristles ventrally; propleuron with 1 or more fine hairs above base of forecoxa. Prosternum bare.



Figs. 2-6. *Tetanocera arnaudi*, Florissant, Petrified Forest Area, Teller County, Colorado, 2530 m, 11 August 1973, P. H. Arnaud, Jr. 2-5, Paratype, male. 2, Postabdomen, sinistral view. 3, Hypopygium, rear view. 4, Protandrium, ventral view. 5, Antenna. 6, Allotype, female, ventral view of terminalia.

Coxae whitish pruinose with some testaceous areas. Legs mostly yellowish, forefemur more testaceous. Foretarsus and apical $\frac{1}{3}$ of foretibia black; mid- and hindtarsal segments 4 and 5 black, preceding segments with some brown. Posterior surface of midfemur with a single strong bristle near tip.

Wing length 4.4 mm. Membrane greyish yellow hyaline with costal brownish; costal margin and veins yellow, slightly testaceous; crossveins arcuate, infuscated. Halter and squama pale yellow.

Abdominal segments tannish yellow pruinose; postabdomen as in Figs. 2-5.

Allotype female.—Similar to holotype except in abdominal morphology. Fig. 6. Wing length 5.2 mm.

Holotype.—♂, USA, Colorado, Teller County, Florissant, Petrified Forest Area, 2530 m, 11 August 1973, Paul H. Arnaud, Jr., CAS. California Academy of Sciences Type no. 13967.

Allotype.—♀, same data as holotype. Deposited with holotype.

Paratypes.—Same data as holotype (7 ♂, 2 ♀); Colorado, Teller County, 21 August 1959, N. Marston (2 ♂, 2 ♀); Colorado, Saguache County, 1 August 1937, 9000 feet [2743 m], R. H. Painter (1 ♂). At the California Academy of Sciences, University of California at Riverside, and the National Museum of Natural History, Washington, D.C.

Variation.—The specimens at hand show very little variation in color and size. Wing length of 10 ♂, 4.4 to 4.8 mm. Wing length of 4 ♀, 4.8 to 5.4 mm.

Diagnosis.—In Steyskal's (1959) "Key to the American Species of *Tetanocera*," *T. arnaudi* would be placed close to *T. spreta* van der Wulp, a species from the highlands of Mexico. However, examination of the terminalia reveals them to be entirely different. The male terminalia of *T. arnaudi* show some similarity to *T. brevihirta* Steyskal, a species known only from Fairbanks, Alaska, but the external characters are quite different. At rubric 10 in Steyskal's key, *T. spreta* and *T. arnaudi* would be separated as follows:

10(11). Part of foretibia and all of foretarsus black.

- a. Apical $\frac{1}{7}$ of foretibia black, abdomen with middorsal brown stripe, terminalia as illustrated (by Steyskal, Fig. 9)
 *T. spreta* van der Wulp
- b. Apical $\frac{1}{3}$ of foretibia black, abdomen dorsally unicolorous, terminalia as illustrated (in our Figs. 2-6) . . *T. arnaudi*, new species

Discussion.—*Tetanocera arnaudi* is one of the smallest of the North American *Tetanocera*; perhaps only *T. andromastos* is smaller. The type-locality, Florissant, Teller County, is in the center of the state of Colorado at approximately 39°N latitude. This species is named after Dr. Paul H. Arnaud, Jr., California Academy of Sciences, Golden Gate Park, San Fran-

cisco, California, who for many years has provided material to further our studies on the Sciomyzidae.

ACKNOWLEDGMENTS

We extend our thanks to the following people who have given us assistance: P. H. Arnaud, Jr., California Academy of Sciences, San Francisco; L. Knutson, IIBIII, USDA, Beltsville, Maryland; and G. C. Steyskal, Systematic Entomology Laboratory, USDA, % National Museum of Natural History, Washington, D.C.

LITERATURE CITED

- Stackelberg, A. A. 1963. Species of the genus *Tetanocera* Dum. (Diptera: Sciomyzidae) in the European part of the USSR. *Entomol. Rev.* 42(4): 492-497.
- Steyskal, G. C. 1959. The American species of the genus *Tetanocera* Duméril (Diptera). *Pap. Mich. Acad. Sci. Arts Lett.* (1958)44: 55-91.
- . 1963. Taxonomic notes on Sciomyzidae (Diptera: Acalyptratae). *Pap. Mich. Acad. Sci. Arts Lett.* (1962)48: 113-125.